

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In the Application of:)	
KARP, Christoph D et al.)	Group Art Unit: [not yet assigned]
)	
Title: SYSTEMS AND METHODS FOR)	Examiner: [not yet assigned]
DETECTING MANUFACTURING)	
DEFECTS IN MICROFLUIDIC DEVICES)	Attorney Docket: 134-US
)	
Serial Number: [not yet assigned])	
)	
Filed: Herewith)	
)	

INFORMATION DISCLOSURE STATEMENT


Mail Stop Patent Application
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with 37 CFR §§ 1.97 and 1.98, the items identified in this Information Disclosure Statement ("IDS") are brought to the attention of the Office. The items are listed on the attached form PTO-1449 and copies of only the "Foreign Patent Documents" and "Other Documents" are enclosed for the convenience of the Examiner. Copies of the "U.S. Patent Documents" are not enclosed pursuant to the notice dated July 11, 2003 from the Office of Patent Legal Administration (appearing on the "News & Notices" section of the USPTO website) waiving the requirement to supply such citations in applications filed after June 30, 2003. If, however, the Examiner would find it helpful to have the U.S. citations, Applicants will supply them at the request of the Examiner.

The items identified in this IDS may or may not be "material" pursuant to 37 CFR § 1.56. The submission thereof by Applicants is not to be construed that any such patent, publication, or other information referred to therein is material or considered to be material (37 CFR § 1.97(h)), or even qualifies as "prior art" under 35 USC § 102 with respect to this invention unless specifically designated by Applicants as such.

Respectfully submitted,



Michael F. Labbee
Reg. No. 39,738

Dated: 3/10/04

USPTO Customer No.: 32763

FORM PTO-1449 LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 134-US	SERIAL NO. [not yet assigned]
	APPLICANT: KARP, Christoph D. et al.	
	FILING DATE: March 10, 2004	GROUP: [not yet assigned]

U.S. PATENT DOCUMENTS							
EXAMINER INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
	A1	2003/0180711 A1	9/25/2003	Turner et al.	435	4	2/21/2003
	A2	6,537,506 B1	3/25/2003	Schwalbe et al.	422	130	2/3/2000
	A3	6,514,399 B1	2/4/2003	Parce et al.	204	600	11/28/2000
	A4	2002/0199094 A1	12/26/2002	Strand et al.	713	150	12/27/2001
	A5	2002/0189947	12/19/2002	Paul, et al.	G01L	1/20	8/29/01
	A6	6,494,614 B1	12/17/2002	Bennett et al.	366	336	9/21/1999
	A7	6,428,896 B1	8/6/2002	Ramsey et al.	428	428	6/17/1998
	A8	2002/0094533 A1	7/18/2002	Hess et al.	435	6	10/10/2001
	A9	6,408,878 B2	6/25/2002	Unger et al.	137	597	2/28/2001
	A10	6,352,577 B1	3/5/2002	Martin et al.	96	4	5/3/2000
	A11	6,312,888 B1	11/6/2001	Wong et al.	435	4	10/16/2000
	A12	6,240,790	6/5/2001	Swedberg, et al.	G01N	1/00	6/18/99
	A13	6,156,438	12/5/2000	Gumm et al.	428	458	4/9/1998
	A14	6,150,180	11/21/2000	Parce et al.	436	514	7/26/1999
	A15	6,149,870	11/21/2000	Parce et al.	422	100	9/28/1999
	A16	6,074,725	06/13/2000	Kennedy	428	188	12/10/97
	A17	6,073,482	6/13/2000	Moles	73	53.01	1/20/1999
	A18	6,068,751	5/30/2000	Neukermans	204	601	12/17/1996
	A19	6,048,498	4/11/2000	Kennedy	422	99	11/12/1998
	A20	6,043,080	3/28/2000	Lipshutz et al.	435	287.2	12/11/1998
	A21	6,033,546	3/7/2000	Ramsey	204	603	9/15/1998
	A22	6,010,607	1/4/2000	Ramsey	204	435	9/16/1998
	A23	5,935,401	8/10/1999	Amigo	204	454	9/18/1996

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U.S. PATENT DOCUMENTS							
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	A24	5,922,591	07/13/1999	Anderson et al.	435	287.2	06/27/96
	A25	5,922,210	07/13/1999	Brody et al.	210	767	06/14/96
	A26	5,885,470	3/23/1999	Parce et al.	216	33	4/14/1997
	A27	5,882,465	3/16/1999	McReynolds	156	285	6/18/1997
	A28	5,846,396	12/8/1998	Zanzucchi et al.	204	601	11/9/1995
	A29	5,792,943	8/11/1998	Craig	73	61.52	4/30/1997
	A30	5,690,763	11/25/1997	Ashmead et al.	156	60	6/6/1995
	A31	5,525,405	6/11/1996	Coverdell et al.	428	213	12/14/1994
	A32	5,478,751	12/26/1995	Oosta et al.	436	165	4/18/1994
	A33	5,443,890	8/22/1995	Öhman	428	167	2/4/1992
	A34	5,376,252	12/27/1994	Ekström, et al.	G01N	27/26	11/10/92
	A35	5,070,606	12/10/1991	Hoopman et al.	29	890.03	10/4/1989
	A36	5,041,181	8/20/1991	Brackett et al.	156	84	8/23/1990
	A37	5,039,493	08/13/1991	Oprandy	422	101	05/04/90
	A38	4,558,333	12/10/1985	Sugitani et al.	346	140 R	7/2/1982

FOREIGN PATENT DOCUMENTS							
EXAMINER INITIALS		DOCUMENT NUMBER	DATE	COUNTRY	NAME	TRANSLATION?	
	B1	WO 02/30486 A2	4/18/2002	WIPO	Manager et al.	YES	NO
	B2	WO 02/28532 A2	4/11/2002	WIPO	Strand et al.		
	B3	EP 1 106 244 A2	6/13/2001	EPC	Bergh et al.		
	B4	WO 01/38865 A1	5/31/2001	WIPO	Harrison et al.		
	B5	WO 01/09598 A1	2/8/2001	WIPO	Holl et al.		

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	B6	WO 01/01025 A2	1/4/2001	WIPO	Unger et al.	YES	NO
	B7	WO 00/21659	4/20/2000	WIPO	Burdon et al.		
	B8	WO 99/60397	11/25/1999	WIPO	Holl et al.		
	B9	WO 99/56954	11/11/1999	WIPO	Caliper Technologies Corp.		
	B10	WO 99/33559	7/8/1999	WIPO	Pourahmadi et al.		
	B11	WO 99/19717	4/22/1999	WIPO	Bjornson et al.		
	B12	WO 99/09042	2/25/1999	WIPO	Christel et al.		
	B13	WO 98/45693	10/15/1998	WIPO	Soane et al.		
	B14	WO 98/07069	2/19/1998	WIPO	Mastrangelo et al.		
	B15	WO 97/06468	2/20/1997	WIPO	Rabani		
	B16	EP 0 708 331 A1	4/24/1996	EPC	Witt et al.		

EXAMINER INITIALS	NON PATENT LITERATURE DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)	
	C1	Olsen, Kimberly G. et al., <i>Immobilization of DNA Hydrogel Plugs in Microfluidic Channels</i> , "Analytical Chemistry," Vol. 74, No. 6, March 15, 2002, pp. 1436-1441.
	C2	Kameoka, Jun et al., <i>A Polymeric Microfluidic Chip for CE/MS Determination of Small Molecules</i> , "Analytical Chemistry," Vol. 73, No. 9, May 1, 2001, pp. 1935-1941.
	C3	Fan, Z.H. et al., "Plastic Microfluidic Devices for DNA Sequencing and Protein Separations," <u>Micro Total Analysis Systems</u> , 2001, J.M. Ramsey and A. van den Berg (eds.), Kluwer Academic Publishers, the Netherlands, pp. 19-21.
	C4	Liu, Yingjie et al., "Microfabricated Polycarbonate CE Devices for DNA Analysis," <u>Micro Total Analysis Systems</u> , 2001, J.M. Ramsey and A. van den Berg (eds.), Kluwer Academic Publishers, the Netherlands, pp. 119-120.
	C5	Palm, Anders et al., "Integrated Sample Preparation and MALDI MS on a disc," <u>Micro Total Analysis Systems</u> , 2001, J.M. Ramsey and A. van den Berg (eds.), Kluwer Academic Publishers, the Netherlands, pp. 216-218.
	C6	Svedberg, Malin et al., "Electrospray From A Plastic Chip," <u>Micro Total Analysis Systems</u> , 2001, J.M. Ramsey and A. van den Berg (eds.), Kluwer Academic Publishers, the Netherlands, pp. 335-336.
	C7	Prins, M.W.J. et al., <i>Multichannel structures made from micrometre-thick plastic foils</i> , "J. Micromech. Microeng.," 9, (1999), pp. 362-363.
	C8	Martin, P.M. et al., "Fabrication of plastic microfluidic components," Part of the SPIE Conference on Microfluidic Devices and Systems, Santa Clara, California, September 1998, SPIE, Vo. 3515.
	C9	Nieh, Jenn-Yeu et al., <i>Hot Plate Welding of Polypropylene. Part I: Crystallization Kinetics</i> , "Polymer Engineering and Science," July 1998, Vol. 38, No. 7.

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EXAMINER INITIALS	NON PATENT LITERATURE DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)	
	C10	Nieh, Jenn-Yeu et al., <i>Hot Plate Welding of Polypropylene. Part II: Process Simulation</i> , "Polymer Engineering and Science," July 1998, Vol. 38, No. 7.
	C11	Vela, Adam, "An Approach for the Thermal Bonding of Micro-Fluidic Devices," Undergraduate Report, Institute for Systems Research, UG 2001-8.
	C12	Grodzinski, Dr. Piotr, "Development of Plastic Microfluidic Devices for Sample Preparation," Presentation from BioMEMS 2000, Columbus, Ohio, September 24, 2000.
	C13	Nguyentat, Thinh, "Diffusion Bonding – An Advanced Material Process for Aerospace Technology," Web document published at http://www.vacets.org/vtic97/ttnnguyen.htm
	C14	Jacobson, Stephen C. et al., <i>Integrated Microdevice for DNA Restriction Fragment Analysis</i> , "Analytical Chemistry," Vol. 68, No. 5, March 1, 1996, pp. 720-723.
	C15	Moles, Dr. Donald R., "Microanalytical Systems Development at YSI: A Non-Silicon Approach," Presentation from BioMEMS & Biomedical Nanotechnology World 2000 Conference, Sept. 23-26, 2000.
	C16	Metz, Stefan et al., <i>Polyimide-based microfluidic devices</i> , "LAB on a Chip," 2001, 1, 29-34.
	C17	Soper, Steven A. et al., <i>Polymetric Microelectromechanical Systems</i> , "Analytical Chemistry," October 1, 2000, pp. 643 A-651 A.
	C18	Ulbricht, Mathias et al., <i>Surface modification of ultrafiltration membranes by low temperature plasma, II. Graft polymerization onto polyacrylonitrile and polysulfone</i> , "Journal of Membrane Science," 111, (1996), 193-215.
	C19	Koehler, Jeffrey A. et al., <i>Intermolecular Forces between a Protein and a Hydrophilic Modified Polysulfone Film with Relevance to Filtration</i> , "Langmuir," Vol. 16, No. 26, 2000, pp. 10419-10427.
	C20	Kaeselev, Bozena et al., <i>Photoinduced grafting of ultrafiltration membranes: comparision of poly(ether sulfone) and poly(sulfone)</i> , "Journal of Membrane Science," 194, (2001), 245-261.
	C21	Ocvirk, Gregor et al., <i>High Performance Liquid Chromatography Partially Integrated onto a Silicon Chip</i> , "Analytical Methods and Instrumentation," Vol. 2, No. 2, 74-82, (1995).
	C22	Buranda, Tione et al. <i>Biomolecular Recognition on Well-Characterized Beads Packed in Microfluidic Channels</i> , "Analytical Chemistry," Vol. 74, No. 5, March 1, 2002, pp. 1149-1156.
	C23	Moore, Roger E., et al., <i>A Microscale Electrospray Interface Incorporating a Monolithic, Poly(styrene-divinylbenzene) Support for On-Line Liquid Chromatography/Tandem Mass Spectrometry Analysis of Peptides and Proteins</i> , "Analytical Chemistry," Vol. 70, No. 23, December 1, 1998.
	C24	Martin, Peter M., et al., "Laminated Ceramic Microfluidic Components for Microreactor Applications," Web document published at: www.pnl.gov/microcats/aboutus/publications/microfabrication/laminc ceramic-rev.pdf .

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